

September 1, 2004

Mr. Michael Kansler
President
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION - EXTENDED POWER UPRATE,
VERMONT YANKEE NUCLEAR POWER STATION (TAC NO. MC0761)

Dear Mr. Kansler:

By letter dated September 10, 2003, as supplemented on October 1, and October 28 (2 letters), 2003, January 31 (2 letters), March 4, May 19, July 2, July 27, July 30, August 12, and August 25, 2004, Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc., submitted a proposed license amendment to the U.S. Nuclear Regulatory Commission (NRC) for the Vermont Yankee Nuclear Power Station (VYNPS). The proposed amendment, "Technical Specification Proposed Change No. 263, Extended Power Uprate" would allow an increase in the maximum authorized power level for VYNPS from 1593 megawatts thermal (MWT) to 1912 MWT.

The NRC staff is reviewing your submittal and has determined that additional information is required to complete the review. The specific information requested is addressed in the enclosure.

We request that the additional information be provided by September 30, 2004. The response timeframe was discussed with Ms. Ronda Daflucas of your staff on August 31, 2004. If circumstances result in the need to revise your response date, or if you have any questions, please contact me at (301) 415-1420.

Sincerely,

/RA/

Richard B. Ennis, Senior Project Manager, Section VY
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosure: As stated

cc w/encl: See next page

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ACCESSION NO.: ML042440537

OFFICE	PDI-VY/PM	SRXB/SC	PDI-VY/SC
NAME	REnnis	FAkstulewicz	AHowe
DATE	9/1/04	8/31/04	9/1/04

OFFICIAL RECORD COPY

Vermont Yankee Nuclear Power Station

cc:

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Vermont Yankee Nuclear Power Station

cc:

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REQUEST FOR ADDITIONAL INFORMATION
REGARDING PROPOSED LICENSE AMENDMENT
EXTENDED POWER UPRATE
VERMONT YANKEE NUCLEAR POWER STATION
DOCKET NO. 50-271

By letter dated September 10, 2003, as supplemented on October 1, and October 28 (2 letters), 2003, January 31 (2 letters), March 4, May 19, July 2, July 27, July 30, August 12, and August 25, 2004 (References 1 through 13), Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (Entergy or the licensee), submitted a proposed license amendment to the U.S. Nuclear Regulatory Commission (NRC) for the Vermont Yankee Nuclear Power Station (VYNPS). The proposed amendment, "Technical Specification Proposed Change No. 263, Extended Power Uprate" would allow an increase in the maximum authorized power level for VYNPS from 1593 megawatts thermal (MWT) to 1912 MWT.

The NRC staff is reviewing your Extended Power Uprate (EPU) amendment request and has determined that additional information is required to complete the review. The specific information requested is addressed in the following request for additional information (RAI).

Enclosure

Reactor System Branch (SRXB)

Boiling Water Reactors and Nuclear Performance Section (SRXB-A)

Reviewer: Leonard Ward

Please provide the following information to support independent calculations being performed by the NRC staff:

- 1) The RELAP5 nodalization diagram for the VYNPS Nuclear Steam Supply System.
- 2) Plots of the limiting large break loss-of-coolant accident emergency core cooling system licensing analyses from SAFER/GESTR. Please include the following plots:
 - hot bundle inlet and outlet mass flow rate
 - hot bundle inlet and outlet enthalpy
 - hot bundle hot spot and outlet quality and void fraction
 - hot rod surface heat transfer coefficient
 - total core mass flow rate
 - system pressure
 - core power
 - break mass flow rate
 - break quality
 - peak cladding temperature

In addition, provide a table listing key assumptions and event timings, if available.

REFERENCES

- 1) Entergy letter (BVY 03-80) to NRC dated September 10, 2003, "Vermont Yankee Nuclear Power Station, Technical Specification Proposed Change No. 263, Extended Power Uprate"
- 2) Entergy letter (BVY 03-90) to NRC dated October 1, 2003, "Vermont Yankee Nuclear Power Station, Technical Specification Proposed Change No. 263, Supplement No. 1, Extended Power Uprate - Technical Review Guidance"
- 3) Entergy letter (BVY 03-95) to NRC dated October 28, 2003, "Vermont Yankee Nuclear Power Station, Technical Specification Proposed Change No. 263, Supplement No. 2, Extended Power Uprate - Grid Impact Study"
- 4) Entergy letter (BVY 03-98) to NRC dated October 28, 2003, "Vermont Yankee Nuclear Power Station, Technical Specification Proposed Change No. 263, Supplement No. 3, Extended Power Uprate - Updated Information"
- 5) Entergy letter (BVY 04-009) to NRC dated January 31, 2004, "Vermont Yankee Nuclear Power Station, Technical Specification Proposed Change No. 263, Supplement No. 4, Extended Power Uprate - NRC Acceptance Review"
- 6) Entergy letter (BVY 04-008) to NRC dated January 31, 2004, "Vermont Yankee Nuclear Power Station, Technical Specification Proposed Change No. 263, Supplement No. 5, Extended Power Uprate - Response to Request for Additional Information"
- 7) Entergy letter (BVY 04-025) to NRC dated March 4, 2004, "Vermont Yankee Nuclear Power Station, Technical Specification Proposed Change No. 263, Supplement No. 6, Extended Power Uprate - Withholding Proprietary Information"
- 8) Entergy letter (BVY 04-050) to NRC dated May 19, 2004, "Vermont Yankee Nuclear Power Station, Technical Specification Proposed Change No. 263, Supplement No. 7, Extended Power Uprate - Confirmatory Results"
- 9) Entergy letter (BVY 04-058) to NRC dated July 2, 2004, "Vermont Yankee Nuclear Power Station, Technical Specification Proposed Change No. 263, Supplement No. 8, Extended Power Uprate - Response to Request for Additional Information"
- 10) Entergy letter (BVY 04-071) to NRC dated July 27, 2004, "Vermont Yankee Nuclear Power Station, Technical Specification Proposed Change No. 263, Supplement No. 9, Extended Power Uprate - Revised Containment Overpressure Envelope"
- 11) Entergy letter (BVY 04-074) to NRC dated July 30, 2004, "Vermont Yankee Nuclear Power Station, Technical Specification Proposed Change No. 263, Supplement No. 10, Extended Power Uprate - Response to Request for Additional Information"

- 12) Entergy letter (BVY 04-081) to NRC dated August 12, 2004, "Vermont Yankee Nuclear Power Station, Technical Specification Proposed Change No. 263, Supplement No. 11, Extended Power Uprate - Response to Request for Additional Information"
- 13) Entergy letter (BVY 04-086) to NRC dated August 25, 2004, "Vermont Yankee Nuclear Power Station, Technical Specification Proposed Change No. 263, Supplement No. 12, Extended Power Uprate - Revised Grid Impact Study"